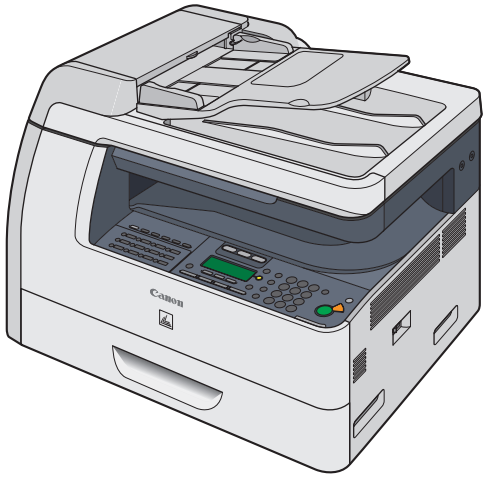
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Canon

Scanner Driver Guide

imageCLASS
MF6500
Series



Please read this guide before operating this product. After you finish reading this guide, store it in a safe place for future reference.

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Manuals for the Machine

The manuals for this machine are divided as follows. Please refer to them for detailed information.

Read this manual first.

Starter Guide

Read this manual to learn the required settings and connections before using the machine.

- What you can do with the machine
- Machine setup
- Connection and settings before using the machine
- Connecting the machine to a network
- Software installation



Read this manual next.

Basic Operation Guide

Read this manual to learn information about basic operations and machine functions.

- Safety instructions
- Copying
- Sending and receiving faxes
- Printing and scanning
- Maintenance
- Specifications



Read the sections of these manuals that correspond to your intended use.

Reference Guide

Read this manual to learn detailed information about advanced machine operations and functions, and how to customize machine settings.

- Advanced features
- Network settings
- Remote user interface
- System settings
- Troubleshooting



(Located on User Software CD)

Scanner Driver Guide

Read this manual to learn how to use the machine as a local scanner.

- System requirements
- Scanning procedure
- How to solve scanning problems

This Document



(Located on User Software CD)

- To view the manuals in PDF format, Adobe Reader/Acrobat Reader/Acrobat is required. If Adobe Reader/Acrobat Reader/Acrobat is not installed on your system, please download it from the Adobe Systems Incorporated website (http://www.adobe.com).
- Considerable effort has been made to make sure that the manuals for the machine are free of inaccuracies and omissions. However, as we are constantly improving our products, if you need an exact specification, please contact Canon.
- The machine illustration on the cover may differ slightly from your machine.

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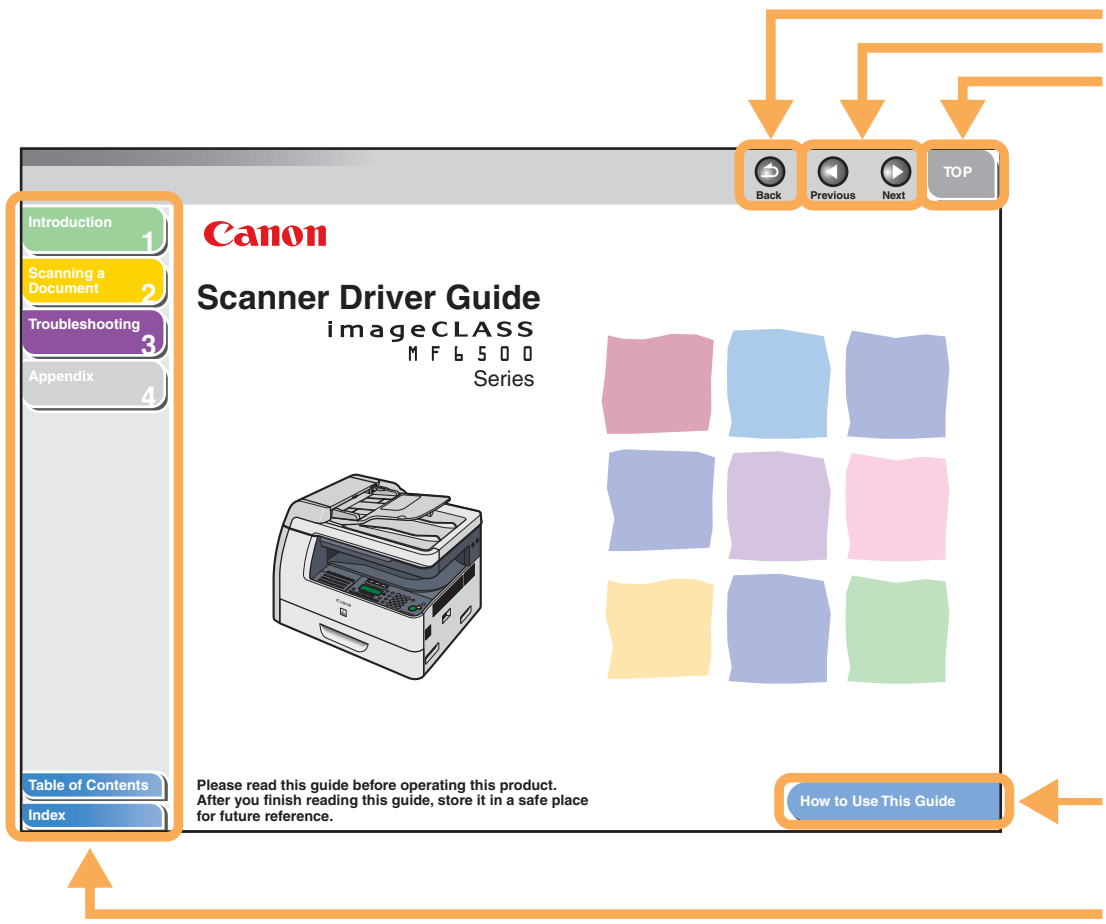
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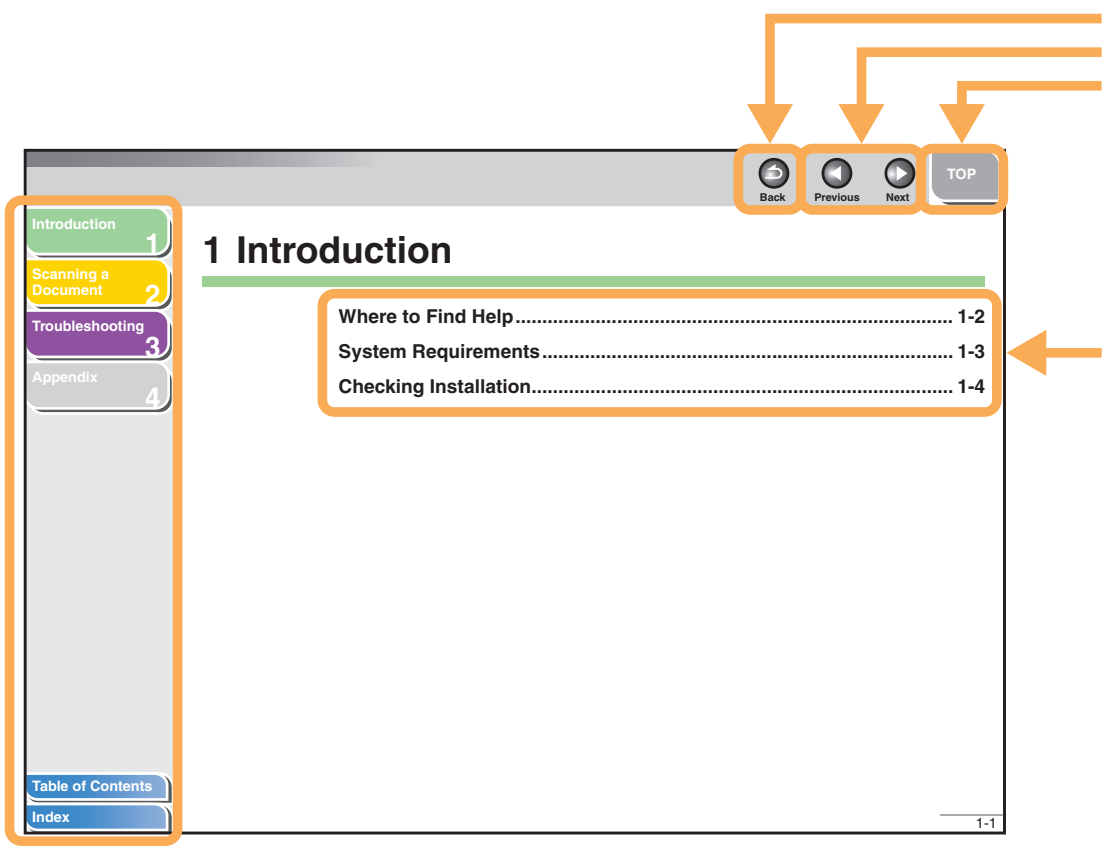
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Using the Chapter Topic List



Returns to the last page opened.
Displays the previous or next page.
Returns to the top page.

Table of contents for the chapter.

Quick links to the list of things you can do, topics for each chapter, table of contents, and the index.

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The following symbols are used throughout the manuals for the machine and indicate the warnings, cautions and notes you should keep in mind when using the machine.

WARNING

Indicates a warning that may lead to death or serious injury if not observed.

CAUTION

Explains how to avoid actions that could injure you or damage your machine.

NOTE

Explains operating restrictions and how to avoid minor difficulties.

In addition, this guide uses a distinctive notation to identify buttons:

– Menu items you select and the buttons you press on the screen appear in square brackets: [Preferences].

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Where to Find Help

When you encounter a problem during installation of the driver software or while operating your machine, consult the following:

In This Manual

See Chapter 3, “Troubleshooting.”

In the Basic Operation Guide*

See Chapter 11, “Troubleshooting.”
*Not available depending on the country of purchase

In the Reference Guide

See Chapter 10, “Troubleshooting.”

Readme.txt File

The hints, limitations, and restrictions you need to be aware of when using the ScanGear and MF Toolbox are included in the Readme.txt file provided with these programs.

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System Requirements

General

– IBM or IBM-compatible PC

– PC equipped with a USB port and the USB class driver installed

Microsoft Windows 2000 Professional
CPU: Intel® Pentium® 133 MHz or higher (USB 1.1),
Intel® Pentium® II or higher (USB 2.0)
Memory: 128 MB or more

Microsoft Windows XP
CPU: Intel® Pentium®/Celeron® 300 MHz or higher (USB 1.1),
Intel® Pentium® II or higher (USB 2.0)
Memory: 128 MB or more

Microsoft Windows Vista
CPU: Intel® Pentium® 800 MHz or faster
Memory: 512 MB or more

NOTE

The USB 2.0 Hi Speed connection requires a PC equipped with a CPU higher than Intel® Pentium® II, more than 128 MB of RAM, and with Windows Vista, Windows XP service pack released later than SP1 or Windows 2000 SP4 installed. If your PC meets all of these requirements and is preinstalled with USB 2.0 Host Controller, the USB 2.0 connection will be guaranteed.

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Checking Installation

Check if the driver is installed successfully.

1. Open the [Scanners and Cameras] folder (Windows 2000: the [Scanners and Cameras Properties] dialog box).

Click [start] on the Windows task bar → select [Control Panel] → [Printers and other Hardware] → [Scanners and Cameras]. (Windows Vista: [start] → [Control Panel] → [Hardware and Sound] → [Scanners and Cameras]. Windows 2000: [Start] → [Settings] → [Control Panel] → double-click [Scanners and Cameras].)
Make sure the corresponding scanner driver icon is displayed.

NOTE

If the driver has not been installed on your computer, see "Software Settings with Computer" in the *Starter Guide* and install it.

2. If the [Canon MF Toolbox 4.9] icon is displayed on the Windows desktop, installation of the MF Toolbox 4.9 has been successful.

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Scanning with [Start] on the Machine

You can scan documents and transmit the scanned data to your computer using the operation panel of the machine.

NOTE

Your machine must be connected via USB and the USB scanner driver must be loaded to scan. This machine does not support network scanning.

1. **Set documents.**
2. **Press [SCAN] on the machine.**
3. **Press [Start] on the machine.**

   If you are asked to select a program to launch, select “MF Toolbox Ver4.9.” The scanned document will be processed according to your settings.

   When scanning is completed, a folder with the scanning date will be created in the [My Pictures] folder in the [My Documents] folder, and your document will be saved in this folder.(In VISTA, the folder will be created in the [Pictures] folder.)

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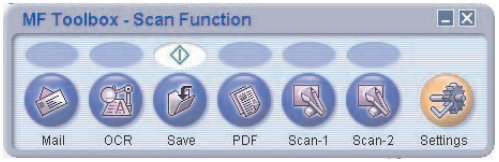
Setting the Scanning Function for [Start]

When you scan for the first time using [Start] on the machine, scanning will start in the same way as when you click [Save] in the MF Toolbox. By following procedure below you can change the set for scanning function on each of MF Toolbox or other applications when you press [start].

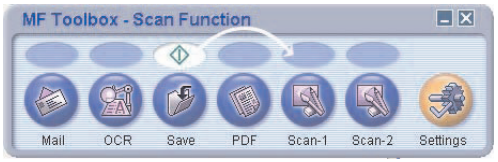
Setting up an application which has been registered to MF Toolbox

1. On the Windows desktop, double-click the [Canon MF Toolbox 4.9] icon to open the MF Toolbox.

You can also open the MF Toolbox by clicking [start] on the Windows task bar → [(All) Programs] → [Canon] → [MF Toolbox 4.9] → [Toolbox 4.9].



2. Drag the ◈ mark over the button you want to select.

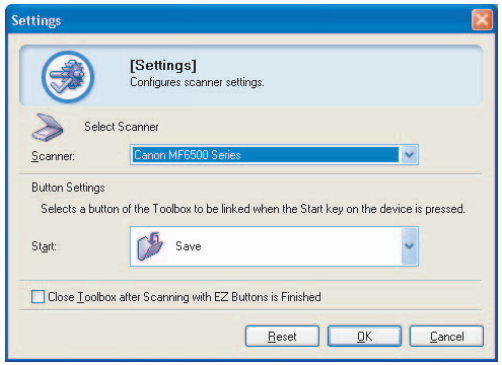


The ◈ mark will be displayed above the button you select.



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Also you can set it up in the following way.
In the MF Toolbox, click [Settings] to open the [Settings] dialog box. From the drop-down list, select the scanning function you want to link [Start] to, then click [OK].



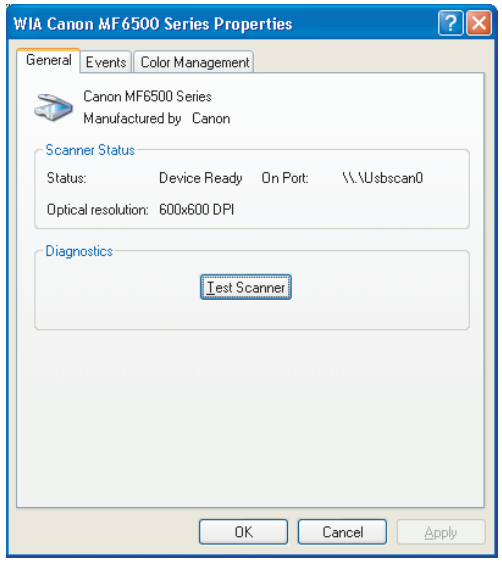
Setting up other applications which have not been registered to MF Toolbox

1. Open the [Scanners and Cameras] folder (Windows 2000: the [Scanners and Cameras Properties] dialog box).

Click [start] on the Windows task bar → select [Control Panel] → [Printers and other Hardware] → [Scanners and Cameras]. (Windows Vista: [start] → [Control Panel] → [Hardware and Sound] → [Scanners and Cameras]. Windows 2000: [Start] → [Settings] → [Control Panel] → double-click [Scanners and Cameras].)

2. Click the corresponding scanner driver icon.

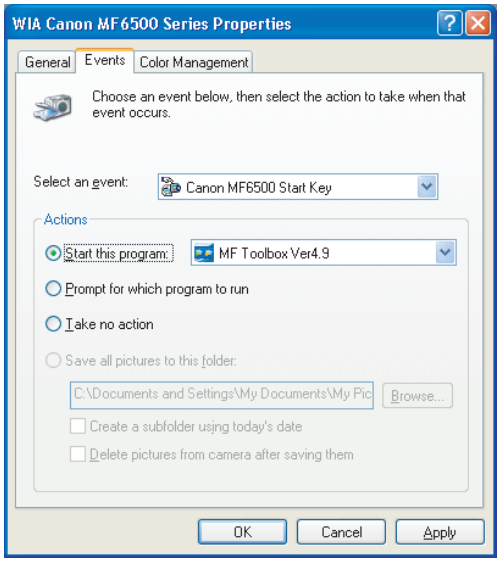
3. Select [Properties] from the [File] menu. (Windows 2000/Vista: Click [Properties].)



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4. Specify an action for [Start].

On Windows XP/Vista:
Select the [Events] tab → select the option corresponding to your machine from [Select an event] → select the operation for [Start this program] in [Actions] → click [OK].



On Windows 2000:
Select the [Events] tab → select the option corresponding to your machine from [Scanner events] → select the operation for [Start] in [Send to this application] → click [OK].

NOTE

If the settings you specified in the scanner property dialog box do not work immediately, disconnect and reconnect the USB cable, or restart your computer.

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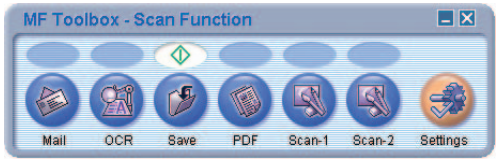
Scanning with the MF Toolbox

You can scan a document using the buttons on the MF Toolbox.

1. Set documents.

2. On the Windows desktop, double-click the [Canon MF Toolbox 4.9] icon to open the MF Toolbox.

You can also open the MF Toolbox by clicking [start] on the Windows task bar → [(All) Programs] → [Canon] → [MF Toolbox 4.9] → [Toolbox 4.9].



3. Click one of the scanning buttons.

[Mail]: The document will be scanned and attached to an e-mail message in your e-mail application.

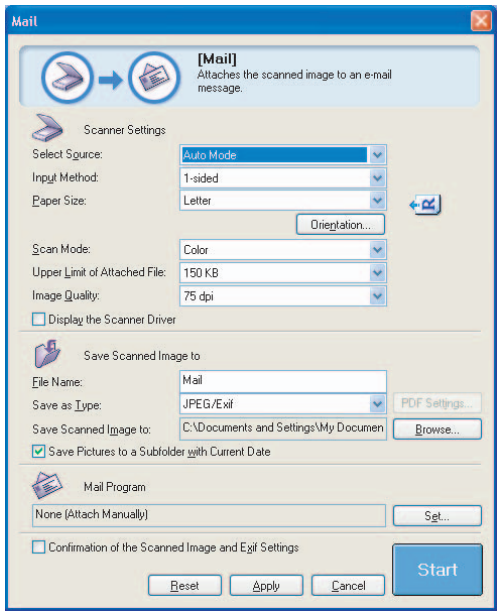
[OCR]: The text will be scanned and read by the OCR software.

[Save]: The document will be scanned and saved.

[PDF]: The text will be scanned and saved as a PDF file.

[Scan-1], [Scan-2]: The text will be scanned and appear in the registered application. You can change the button name by directly entering a new name (up to 8 characters long) over the button name.

A dialog box appears for each of the buttons.



Example: [Mail] dialog box

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4. Specify the required settings.

For details, see “MF Toolbox Settings,” on p. 2-9.

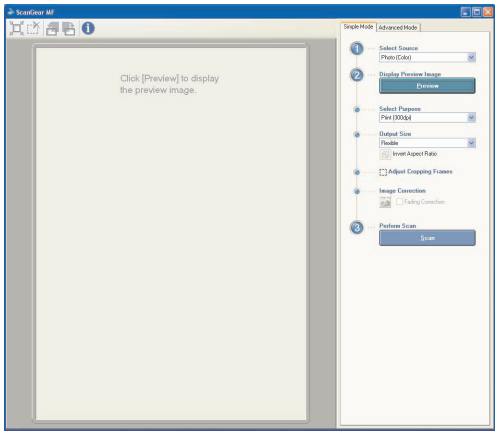
If you want to keep the same settings for future scans, click [Apply] before clicking [Start].

NOTE

With [Scan-1] and [Scan-2] buttons, you can set the different settings for each. If you save the settings by clicking [Apply], the settings will be effective next time.

5. Click [Start].

If you select [Display the Scanner Driver] in step 4, the [ScanGear MF] dialog box will appear.



6. Specify the required settings.

For details, see “Setting Preferences and Scanning with ScanGear MF,” on p. 2-20.

7. Click [Scan].

When scanning is completed, a folder with the scanning date will be created in the [My Pictures] folder in the [My Documents] folder, and your document will be saved in this folder. (In Vista, the folder will be created in the [Pictures] folder.)

If you have applications registered to the [Mail], [OCR], [PDF], [Scan-1], or [Scan-2] button, the scanned image will be displayed in the application or attached to an e-mail message after scanning. For details, see “External Program (Mail Program),” on p. 2-13.

For some models, the CD-ROM provided with the machine contains the following applications which can be used with the MF Toolbox. They will be registered in the MF Toolbox buttons at the time of installation.

[OCR]: ScanSoft OmniPage SE

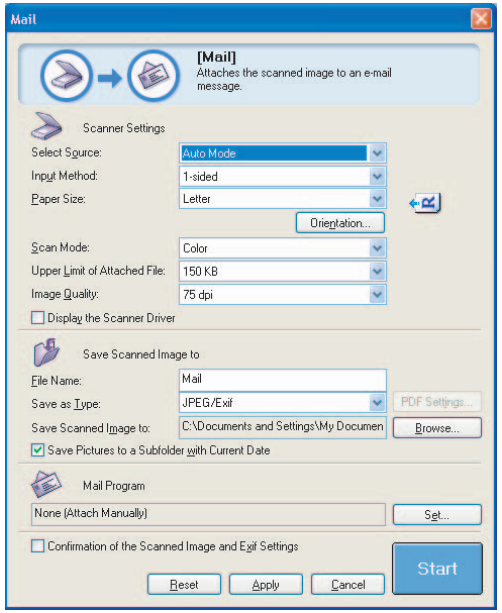
[PDF]: Presto! PageManager

NOTE

ScanSoft OmniPage and Presto! PageManager are not supported on Windows XP 64-bit version.

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MF Toolbox Settings



Example: [Mail] dialog box

Scanner Settings

You can specify the scanning mode, resolution, document size, and file size of the scanned image.

[Select Source] Selects where the document is placed ([Platen Glass], [ADF], or [Auto Mode]).

NOTE

When [Auto Mode] is selected, the document in the ADF is automatically scanned. If there is no document in the ADF, the document on the platen glass will be scanned.

[Input Method] Specifies if the document to be scanned is 1-sided or 2-sided. You cannot select this item when [Platen Glass] is selected in [Select Source].

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[Paper Size] Selects the size of the document to be scanned. Selecting [Custom] opens the [Paper Size Settings] dialog box which enables you to set the custom paper size. When scanning using the [Save], [PDF], [Scan-1] or [Scan-2] button and [Platen Glass] is selected in [Select Source], you can also scan large size documents by selecting [Stitch-assist (11"x17")], [Stitch-assist (A3)] or [Stitch-assist (Platen x 2)] (see “Scanning a Large Document,” on p. 2-18).

[Orientation] Opens the [Orientation] dialog box. This dialog box enables you to specify the orientation of the document. When [2-sided] is selected in [Input Method], select also the binding location of the document.
This button is disabled when [Platen Glass] is selected in [Select Source].

 (Original Orientation)

Shows the direction of scanning paper. The icon display varies depending on the settings for [Select Source], [Paper Size], and [Orientation].

[Scan Mode] Selects the scan mode. The scan modes you can select differ depending on the MF Toolbox button you press.

[Black and White]:
Scans document as a black and white image.

[Black and White (OCR)]:
Scans document as a black and white image for OCR software.

[Grayscale]:
Scans document as a grayscale image (similar to a monochrome picture).

[Color]:
Scans document as a color image.

[Color (Magazine)]:
Scans document as a color image with the Descreen function, which enables you to reduce the moire when scanning printed photographs and pictures.

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[Upper Limit of Attached File]

Selects an approximate upper size limit (after compression) for the image you will send. For an ordinary mail message, [150 KB] is recommended.
You can specify this item when scanning using the [Mail] button and [JPEG/Exif] is selected in [Save as Type].

[Image Quality] Selects the scan quality (resolution).
When scanning using the [Mail] button, the resolution you can select depends on the setting in [Upper Limit of Attached File].

[Display the Scanner Driver]

If you select this check box, all items in the [Scanner Settings] become invalid, and when [Start] is clicked the [ScanGear MF] dialog box appears and enables you to make advanced settings for scanning.
This check box is not available when scanning using the [OCR] button.

Save Scanned Image to

You can specify the file name, file format, and location to save the scanned image. If you select PDF as a file format, you can also specify the detailed settings for the PDF file.

[File Name] Enter a file name for the scanned image.
If you save another file with the same name, four digits starting from 0001 will be attached after the file name.

[Save as Type] Specifies the file type to save the scanned image.

[BMP]:
Bitmap format.

[JPEG/Exif]:
JPEG/Exif format. This option is available when [Grayscale], [Color] or [Color (Magazine)] is selected in [Scan Mode].

[TIFF]:
TIFF format.

[PDF]:
PDF format.

[PDF (Multiple Pages)]:
Creates one PDF file from two or more scanned pages (see “Creating One PDF File from Two or More Pages,” on p. 2-16).

[PDF (Add Page)]:
Adds the scanned image to the last page of an existing PDF file that was created with the MF Toolbox.

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NOTE

– The type of file which can be saved with each button is shown below.

	BMP	JPEG/ Exif	TIFF	PDF	PDF (Multiple Pages)	PDF (Add Page)
[Mail]	–	●	–	●	●	●
[OCR]	●	●	●	–	–	–
[Save]	●	●	●	●	●	●
[PDF]	–	–	–	●	●	●
[Scan-1], [Scan-2]	●	●	●	–	–	–

– When [PDF], [PDF (Multiple Pages)], or [PDF (Add Page)] is selected and if an error message appears indicating that the image size is too large, reduce the data size of the scanned image. For details, see “Output Settings,” on p. 2-28.

[PDF Settings] Opens the [PDF Settings] dialog box which enables you to make advanced settings of the PDF file (see “Creating One PDF File from Two or More Pages,” on p. 2-16).

[Save Scanned Image to]

Shows the location to save the scanned images. To change the location, click [Browse] → select a folder → click [OK].

[Add Scanned Image to]

This item appears instead of [Save Scanned Image to] when [PDF (Add Page)] is selected in [Save as Type]. You can select the PDF file to which you want to add the scanned image.

[Save Pictures to a Subfolder with Current Date]

Select this check box to create a folder with current date (e.g. 2007-12-31) in the specified location and save the scanned images in this folder.

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External Program (Mail Program)

When scanning using the [OCR], [PDF], [Scan-1] or [Scan-2] button, you can specify an application to be used to display the scanned image. Click [Set] → select the application to use → click [Open]. You can also specify an application by dragging and dropping the application icon onto the dialog box.

When scanning using the [Mail] button, you can specify an e-mail software to which you want to attach the scanned image. The MF Toolbox is compatible with e-mail software such as Outlook Express, Microsoft Outlook, Microsoft Exchange, EUDORA, Netscape Messenger and Windows Mail (Vista only). Click [Set] → select the application to use → click [OK].

If [None (Attach Manually)] is displayed, you have to attach the image file manually.

Confirmation of the Scanned Image and Exif Settings (Confirm the Scanned Image)

You can preview the scanned images as thumbnail images, and specify the file type and location to save them.

NOTE

– You cannot use this function when scanning with the [OCR] button.
– For the [PDF] button, you can only confirm the scanned image and specify the location to save the image.

Select [Confirmation of the Scanned Image and Exif Settings] (for the [PDF] button, [Confirm the Scanned Image]) → click [Start]. When the scanning is complete, the thumbnail of the scanned image is displayed.
Confirm the thumbnail image → specify the file type and location → press [Save] or [Forward].

[Save as Type] Specifies the file type to save the scanned image. The available file types are the same as those listed in “Save Scanned Image to,” on p. 2-11.

[Exif Settings] Opens the [Exif Settings] dialog box which enables you to set the Exif information when [JPEG/EXIF] is selected in [Save as Type] (see “Exif Settings,” on p. 2-14).

[PDF Settings] Opens the [PDF Settings] dialog box which enables you to make advanced settings of the PDF file (see “Creating One PDF File from Two or More Pages,” on p. 2-16). This button appears when [PDF], [PDF (Multiple Pages)] or [PDF (Add Page)] is selected in [Save as Type].

[Save Scanned Image to]

Specifies the location to save the scanned image.

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[Add Scanned Image to]

This item appears instead of [Save Scanned Image to] when [PDF (Add Page)] is selected in [Save as Type]. You can select the PDF file to which you want to add the scanned image.

[Save Pictures to a Subfolder with Current Date]

Select this check box to create a folder with current date in the specified location and save the scanned images in this folder. This check box is not available when [PDF (Add Page)] is selected in [Save as Type].

[Save] Press to save the scanned images in the specified location.

[Forward] This button appears instead of [Save] when an application is specified in the [Mail Program] or the [External Program] setting. You can forward the scanned images to the application.

[Cancel] Cancels the operation and returns to the previous window. Deletes all the images scanned in the operation.

Exif Settings

You can attach extra information in the EXIF format, such as the description of the image, the date when the image was scanned, etc., to the JPEG files. Select a scanned image from the drop-down list to view and add information for the image.

[Basic Information]

Displays the information automatically acquired by scanning.

[Advanced Information]

Displays the extra information you enter.

[Apply the Same Setting of Input Items Automatically]

Select this check box to use the same values you have specified in the previous scanning operation.

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Scanning an Image from an Application

You can scan an image from a TWAIN- or WIA- (Windows XP/Vista Only) compliant application and use the image in that application. The following is an example of the procedure.

1. **Set documents.**
2. **Open the application you want to use.**
3. **Select the command to scan.**
4. **Select the scanner driver to be used.**

   With Windows XP/Vista, you can use the ScanGear MF or the WIA driver as the scanner driver.
5. **Specify the scanner settings → click [Scan].**

   For details, see “Setting Preferences and Scanning with ScanGear MF,” on p. 2-20, or “Scanning with the WIA Driver,” on p. 2-42.

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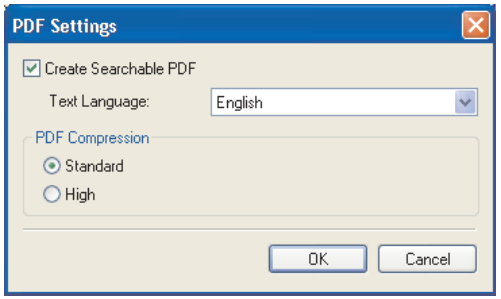
Creating One PDF File from Two or More Pages

You can scan two or more pages and make them into one PDF file.

1. **Set documents.**
2. **Double-click the [Canon MF Toolbox 4.9] icon on the Windows desktop to open the MF Toolbox.**

   You can also open the MF Toolbox by clicking [start] on the Windows task bar → [(All) Programs] → [Canon] → [MF Toolbox 4.9] → [Toolbox 4.9].
3. **Click [PDF].**
4. **Select [PDF (Multiple Pages)] in [Save as Type].**
5. **Specify other required settings → click [PDF Settings].**

   The [PDF Settings] dialog box appears.



6. **Specify the required settings → click [OK].**

   [Create Searchable PDF]: Converts the characters in the document to text data and makes the PDF document searchable with keywords.

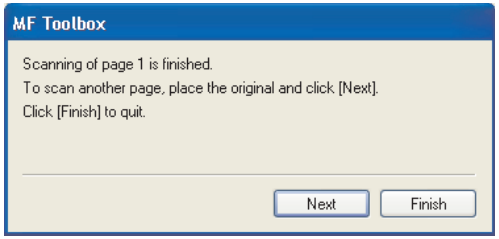
   [Text Language]: Select the language of the text to be scanned. The characters may be recognized more accurately if you select [English] from this drop-down list and set [Image Quality] to [300 dpi] or higher in [Scanner Settings] (see p. 2-11).

   [PDF Compression]: Select [High] for color images such as photos or illustrations to be further compressed, reducing the file size.

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7. Click [Start].

When you set the document on the platen glass, the following dialog box appears as each page is scanned.



To continue to scan, place the next page and click [Next]. When scanning is completed, click [Finish].

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Scanning a Large Document

You can scan a document larger than the platen glass by combining pieces scanned separately.

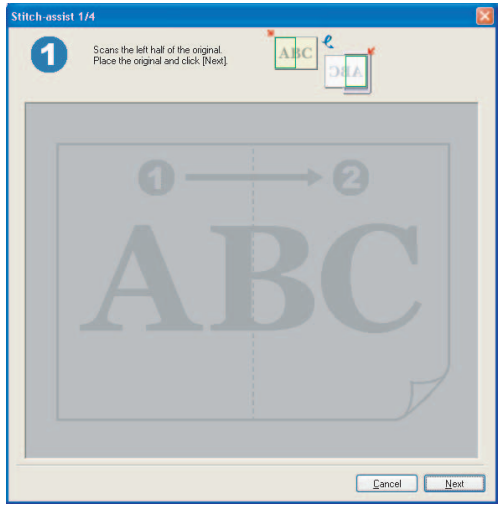
NOTE

This feature is available only when scanning using the [Save], [PDF], [Scan-1] or [Scan-2] button, and [Platen Glass] is selected in [Select Source].

1. **Set a document on the platen glass.**
2. **Double-click the [Canon MF Toolbox 4.9] icon on the Windows desktop to open the MF Toolbox.**

   You can also open the MF Toolbox by clicking [start] on the Windows task bar → [(All) Programs] → [Canon] → [MF Toolbox 4.9] → [Toolbox 4.9].
3. **Click [Save], [PDF], [Scan-1] or [Scan-2].**
4. **Select [Stitch-assist (11"x17")], [Stitch-assist (A3)] or [Stitch-assist (Platen x 2)] in [Paper Size].**
5. **Specify other required settings → click [Start].**

   The [Stitch-assist] wizard dialog box appears.



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6. **Follow the on-screen instructions to scan the left side and the right side of the document separately.**

7. **Adjust the position of the right side of the scanned image for synthesis → click [Next].**

To make adjustment, click the image and move it using the arrow keys on the keyboard. You can also move the image by dragging it.

8. **Specify the scan area with a cropping frame.**

Any blank areas inside the cropping frame will be saved as white background.

9. **Click [OK], [Save] or [Forward].**

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Setting Preferences and Scanning with ScanGear MF

The ScanGear MF enables you to preview the image to be scanned and make detailed adjustments for the image. To use the ScanGear MF, select [Display the Scanner Driver] in the MF Toolbox, or scan from an application.

NOTE

You cannot preview the image when using the ADF.

Switching between Simple Mode and Advanced Mode

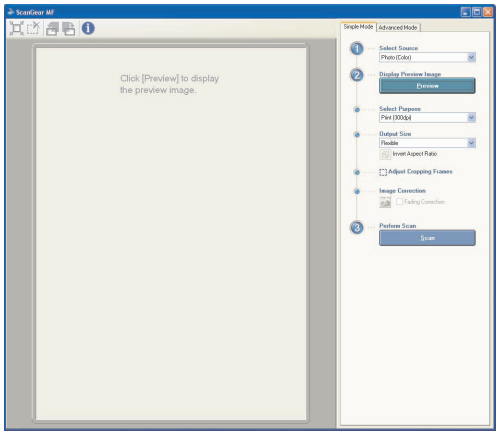
The ScanGear MF has two modes: [Simple Mode] and [Advanced Mode]. With [Advanced Mode] you can perform detailed settings such as resolution and contrast.

To switch between two modes, click the corresponding tab.

NOTE

2-sided scanning is available with [Advanced Mode] only.

Using Simple Mode



1. Set documents.

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2. Select the document type in [Select Source].

[Photo (Color)]: To scan color photos.

[Magazine (Color)]: To scan color magazines with the Descreen function.

[Newspaper (B&W)]: To scan text and line drawings.

[Document (Grayscale)]: To scan color images or text in monochrome. Appropriate for scanning high-resolution monochrome images.

[Document (Color) ADF]: To scan color documents on the ADF.

[Document (Grayscale) ADF]: To scan Grayscale documents on the ADF.

If you select [Document (Color) ADF] or [Document (Grayscale) ADF], skip to step 4.

NOTE

On how to turn off the automatic color correction for the document type other than [Newspaper (B&W)], see "[Color Settings] Tab," on p. 2-39.

3. Click [Preview].

A preview of the scanned image appears in the preview window.

4. Select the use for the scanned image in [Select Purpose].

You can select from [Print (300 dpi)], [Image display (150 dpi)], or [OCR (300 dpi)], depending on the document type you selected in step 2. For details, see "Determining Resolution," on p. 2-41.

5. Select the output size of the scanned image in [Output Size].

The options you can select vary depending on what you selected in step 4.
Click to switch the orientation of the output size (landscape or portrait).

6. Adjust the cropping frame and select the [Fading Correction] check box as needed.

To adjust the cropping frame, click (Auto Crop) or drag the corner or edge of the frame. For details, see "Specifying the Parameters of a Scan," on p. 2-24.

NOTE

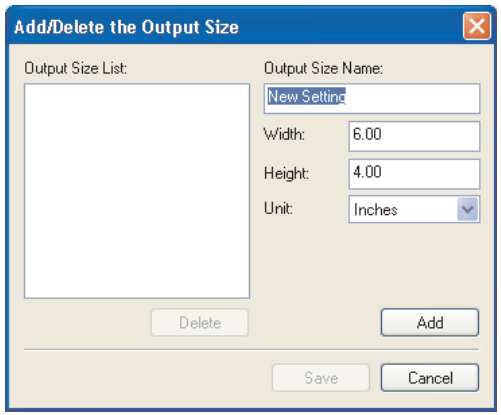
– The [Fading Correction] check box can be selected only when scanning color documents.
– When the preview image is not displayed, the [Fading Correction] check box is disabled.

7. Click [Scan].

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Add/Delete the Output Size

Selecting [Add/Delete] for [Output Size] opens the [Add/Delete the Output Size] dialog box. This dialog box enables you to add and delete the custom output size.



[Purpose] Selects the use for the scanned image from [Print] or [Image Display]. This setting is available with [Advanced Mode] only.

[Output Size Name]
Specifies the output size name you want to register.

[Width] Specifies the width of the output size.

[Height] Specifies the height of the output size.

[Unit] Selects the unit of measurement for the output size.

[Add] Adds the specified output size to the [Output Size List].

[Delete] Deletes the selected output size from the [Output Size List].

[Save] Saves added or deleted output sizes.

Simple Mode Toolbar



(Auto Crop) Crops the image automatically. For details, see “Specifying the Parameters of a Scan,” on p. 2-24.

(Remove Cropping Frame)
Removes the selected cropping frames.

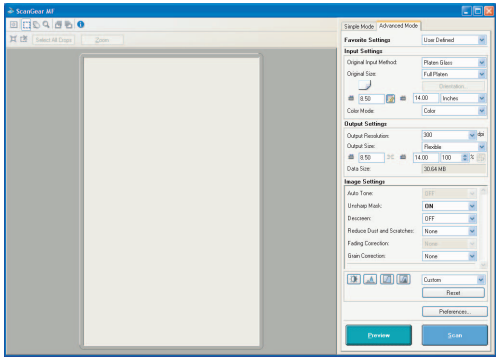
(Left Rotate) Rotates the image 90 degrees left.

(Right Rotate) Rotates the image 90 degrees right.

(Information) Lists the scanning information.

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Using Advanced Mode



1. Set documents.

2. Select settings for [Favorite Settings], [Input Settings], [Output Settings] and [Image Settings], and adjust the color settings.

For details on the settings, see “Advanced Mode Settings,” on p. 2-26.
If you select [ADF (1-sided)] or [ADF (2-sided)] in [Original Input Method], skip to step 4.

3. Click [Preview].

NOTE

– Selecting the range in the preview window and clicking [Zoom] reloads the selected image to be enlarged.
– To delete the displayed preview image, click .

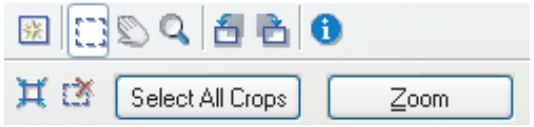
4. If you want to scan only part of the document, specify the parameters.

For details, see “Specifying the Parameters of a Scan,” on p. 2-24.

5. Click [Scan].

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Advanced Mode Toolbar



(Clear) Deletes the preview image from the preview area. It also resets the toolbar settings and color settings.

(Crop) Specifies the parameter of a scan.

(Move) Moves the enlarged image on the screen.

(Zoom) Enlarges or reduces the preview image. Click on the image to zoom in, and right-click on the image to zoom out.

(Left Rotate) Rotates the image 90 degrees left.

(Right Rotate) Rotates the image 90 degrees right.

(Information) Lists the scanning information.

(Auto Crop) Crops the image automatically. For details, see “Specifying the Parameters of a Scan,” on p. 2-24.

(Remove Cropping Frame) Removes the selected cropping frames.

[Select All Crops] When this button is used, all the cropping frames reflect the settings made on the [Advanced Mode] tab sheet.

[Zoom] Click this button to rescan the focal cropping area of the preview image at a higher level of magnification.
Once clicked, this button changes into [Undo]. The image retunes to its original size by clicking [Undo].

Specifying the Parameters of a Scan

You can create scan areas (cropping areas) for images shown in the preview area. When you click [Scan], only the cropped area will be scanned.

NOTE

Crop feature is invalid when [ADF (2-sided)] is selected in [Original Input Method] on the [Advanced Mode] tab sheet.

Selecting the Cropping Area Automatically

After previewing, click (Auto Crop) on the toolbar. Clicking this button enables you to gradually crop off the image outside the borders detected in the preview image.

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Creating a Cropping Frame

Select (Crop) on the toolbar, click on the preview image and drag over the area you wish to select. To make further adjustments, drag the corner or edge of the selected frame or enter the desired parameter values for (Width) and (Height) in [Input Settings] on the [Advanced Mode] tab sheet. To move the cropping frame you have selected, click inside the cropping frame and drag.

NOTE

– To maintain the current width and height proportion of the image, click in [Input Settings].
– When using the ADF, creating a new cropping frame will erase an existing one.

Creating Multiple Cropping Frames (Only when Using the Platen Glass)

You can create another cropping frame even if there is already one in the preview area. Click and drag the mouse cursor outside the existing cropping frame to create a new cropping frame in that area.

You can create up to 10 cropping areas. By clicking [Scan] once, all the cropped areas will be scanned. (Scanning will continue until all selected areas have been scanned.)

The most recently created cropping frame will become the focal point. To make adjustments to previously created cropping frames, select the frame or frames by clicking on them.

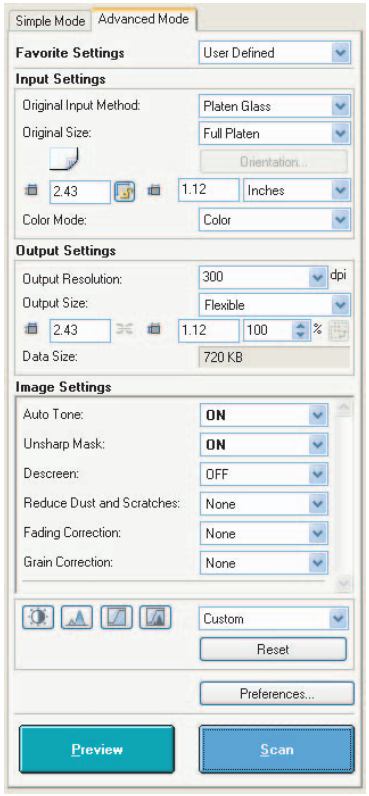
Deleting Cropping Frames

If you want to remove cropping frames, select the frame or frames and do one of the following:

– Click [Delete] on the keyboard.
– Click (Remove Cropping Frame) on the toolbar.
– Right-click on the cropped area and select [Delete].
– Hold down [Ctrl] on the keyboard, right-click outside the cropped area, and select [Delete].

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Advanced Mode Settings



Favorite Settings

Favorite Settings enables you to save a set of settings (Input Settings, Output Settings, Image Settings, Color Settings and Preferences) made for the focal cropping frame. If there are no cropping frames, settings for the whole preview area are saved. You can also recall the saved settings and apply them to the selected frames or the whole preview area.

NOTE

The following items cannot be saved in Favorite Settings:
– Values of (Width) and (Height) in [Input Settings] and in [Output Settings]
– Activation of button (maintaining the proportion of width and height) in [Input Settings]
– Value of [%] (Scale) in [Output Settings]

[User Defined]	When this option is selected, specify a value for each setting.
[Default]	Restores the default settings. The preview image will be cleared.
[Add/Delete]	Opens the [Add/Delete Favorite Settings] dialog box. This dialog box enables you to name and register a set of settings for the current preview image. [Add/Delete] is not displayed when there is no preview image.

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Input Settings

[Original Input Method]

Selects where the document is placed from [Platen Glass], [ADF (1-sided)] or [ADF (2-sided)].

NOTE

If you change this setting after previewing, the preview image will be deleted.

[Original Size] Selects the size of the original document.

NOTE

– If you change this setting after previewing, the preview image will be deleted.
– When the document is loaded in the ADF, select the paper size from [A5 Portrait], [A5 Landscape], [A4], [Letter] and [Legal].
– When [ADF (2-sided)] is selected in [Original Input Method], if the size specified in [Original Size] is different from the actual paper size, the scanning results may differ between the two sides of the page.

(Original Orientation)

Shows the direction of the document being scanned. The icon display varies depending on the settings for [Original Input Method], [Original Size], and [Orientation].

[Orientation] Opens the [Orientation] dialog box. This dialog box enables you to specify the orientation of the original document. When [ADF (2-sided)] is selected in [Original Input Method], select also the binding location of the original document.

(Width) Specifies the width of the input size.

(Height) Specifies the height of the input size.

NOTE

– Some applications have a limit to the amount of image data they can receive. If the parameters of a scan contain more than 21,000 x 30,000 pixels, the image will not be received.
– When [Output Resolution] is set to [600] dpi, minimum parameters of an image are 96 x 96 pixels.
– To maintain the current width and height proportions of the image, click .

[Color Mode] Selects the type of document and the way in which it is scanned.

[Black and White]:
To output documents to a monochrome printer. The contrast in the image is divided at certain levels (threshold values) into black and white and is displayed in two colors. For the threshold setting, see “Color Settings,” on p. 2-31.

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[Grayscale]:
To scan black and white photos or monochrome images. The image is expressed in a 0-255 scale of black and white.

[Color]:
To scan color photos. The image is expressed in 256 levels (8 bit) of R(ed), G(reen) and B(lue).

[Color (Documents)]:
To scan color documents that include texts or charts in addition to color photos. The image is expressed in 256 levels (8 bit) of R(ed), G(reen) and B(lue).

[Text Enhanced]:
To scan texts crisply, particularly to process it with OCR software. The image is displayed in black and white.

Output Settings

[Output Resolution]

Specifies the resolution for the scan. You can select a resolution from the drop-down list, or enter any value between 25-9600 dpi. If you are using the ADF, enter a resolution between 25-600 dpi. For details, see “Determining Resolution,” on p. 2-41.

[Output Size]

Selects the output size of the scanned image. If you select [Add/Delete], the [Add/Delete the Output Size] dialog box will appear and you can add and delete the custom output size (see p. 2-22).
If [Flexible] is selected, enter values in (Width), (Height) or [%] (Scale). The resolution when you actually scan will change in accordance with the value of [%]. The ratio of (Width) and (Height) is linked to (Width) and (Height) in [Input Settings]. You can enter the value for [%] between 25 and 38400, but the upper limit varies depending on the value of [Output Resolution].
Click to switch the orientation of the output size (landscape or portrait). This button is invalid when [Flexible] is selected.

[Data Size]

Shows the data size of the scanned image according to your settings.

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Image Settings

[Auto Tone] Set to [ON] to automatically adjust the tone of the image. You can apply this setting when the preview image is displayed.

NOTE

This setting is available when [Color], [Color (Documents)] or [Grayscale] is selected in [Color Mode], and [Color Correction] is set to [Recommended] or [Color Matching] in the [Preferences] dialog box (see p. 2-39).

[Unsharp Mask] Set to [ON] to emphasize the outline of an image and make it sharper. It is effective for scanning photos etc., which have a soft focus.

NOTE

This setting is available when [Color], [Color (Documents)] or [Grayscale] is selected in [Color Mode].

[Descreen] Set to [ON] to reduce the distorted pattern (moire) when scanning printed photographs and pictures.

NOTE

- This setting is available when [Color], [Color (Documents)] or [Grayscale] is selected in [Color Mode].
- Even if [Descreen] is set to [ON], some moire effect may remain if [Unsharp Mask] is also set to [ON]. In this case, disable [Unsharp Mask].
- A change in this setting is reflected after [Scan] is clicked.

[Reduce Dust and Scratches]

Reduces the dust and scratches on photos.

[None]:
No reduction of dust and scratches will be made.

[Low]:
Reduces only small dust and scratch marks.

[Medium]:
Normally this setting is recommended.

[High]:
Reduces large dust and scratch marks. This may remove delicate parts of the image.

NOTE

This setting is available when [Color], [Color (Documents)] or [Grayscale] is selected in [Color Mode].

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[Fading Correction]

Rebuilds the color quality that has faded over time. It also increases saturation of dull-colored originals to reproduce a vivid image. You can apply this setting when the preview image is displayed.

[None]:
No fading correction will be made.

[Low]:
Corrects slightly faded images.

[Medium]:
Normally this setting is recommended.

[High]:
Corrects highly faded images. This may change the tone of the image.

NOTE

This setting is available when [Color] or [Color (Documents)] is selected in [Color Mode], and [Color Correction] is set to [Recommended] in the [Preferences] dialog box (see p. 2-39).

[Grain Correction] Smoothes out the film grain of the image recorded on fast film. The result is smoother tones and higher overall quality.

[None]:
No grain correction will be made.

[Low]:
Select this setting when the grain in the picture is not so notable.

[Medium]:
Normally this setting is recommended.

[High]:
Smoothes out even very notable grain in the picture. This may lower the image sharpness and tonal quality.

NOTE

– This setting is available when [Color], [Color (Documents)] or [Grayscale] is selected in [Color Mode].
– This setting is not reflected in the preview image.

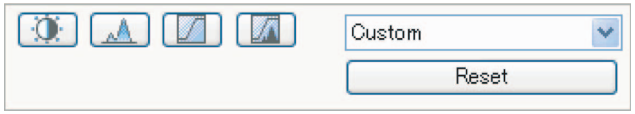
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Color Settings

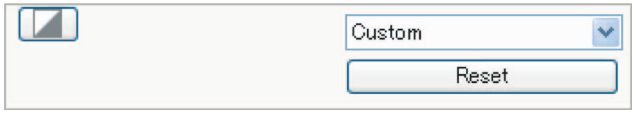
Using Color Settings buttons, you can adjust the brightness and contrast of the whole image, specify highlights and shadows, and adjust the contrast and balance in an image.

The buttons displayed differ depending on your selection in [Color Mode]. When [Text Enhanced] is selected, no Color Settings button is displayed.

When [Color], [Color (Documents)] or [Grayscale] is selected in [Color Mode]:



When [Black and White] is selected in [Color Mode]:

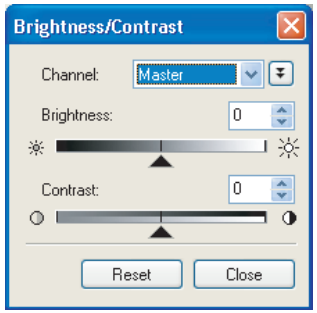


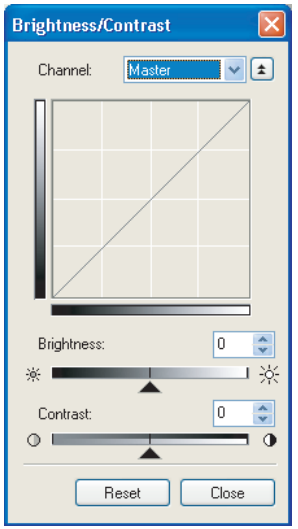
By selecting [Add/Delete] from the drop-down list, you can name and save a set of color settings. For details, see “Tone Curve/ Threshold Drop-Down List,” on p. 2-36.

Clicking a button opens the dialog box for each color setting.
If [Reset] is clicked, all color settings will be reset to the default values.

● Brightness/Contrast

This dialog box enables you to adjust the levels of brightness and contrast of the image.
Click to adjust the brightness and contrast diagrammatically.



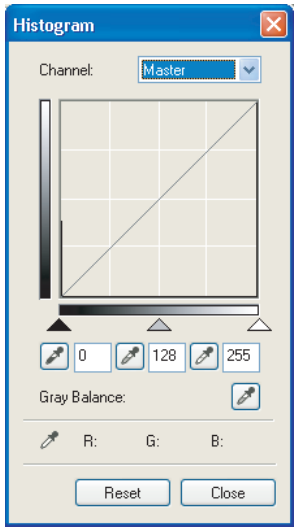


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[Channel]	Select a color to adjust either [Red], [Green], or [Blue], or select [Master] to adjust all three colors together when [Color] or [Color (Documents)] is selected in [Color Mode]. Adjust the elements of grayscale when [Grayscale] is selected in [Color Mode].
[Brightness]	Adjust the brightness of the image by moving the slider ▲ or entering values (–127 to 127).
[Contrast]	Adjust the contrast of the image by moving the slider ▲ or entering values (–127 to 127).
[Reset]	Resets all the current settings to their default values.

● Histogram

This dialog box enables you to see the data concentration at each brightness level in an image. You can specify the darkest and brightest levels within an image, cut the levels and expand the middle of the tonal range of the image.



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[Channel] Select a color to adjust either [Red], [Green], or [Blue], or select [Master] to adjust all three colors together when [Color] or [Color (Documents)] is selected in [Color Mode]. Adjust the elements of grayscale when [Grayscale] is selected in [Color Mode].

(Black-point eyedropper tool)

Click this button, then click a point in the preview image (or inside the focal crop) to specify the darkest point. You can also enter a value (0 to 245) or move the slider ▲ to an appropriate level.

(Mid-point eyedropper tool)

Click this button, then click a point in the preview image (or inside the focal crop) to specify the midtone point. You can also enter a value (5 to 250) or move the slider △ to an appropriate level.

(White-point eyedropper tool)

Click this button, then click a point in the preview image (or inside the focal crop) to specify the highlighted point. You can also enter a value (10 to 255) or move the slider △ to an appropriate level.

(Gray Balance eyedropper tool)

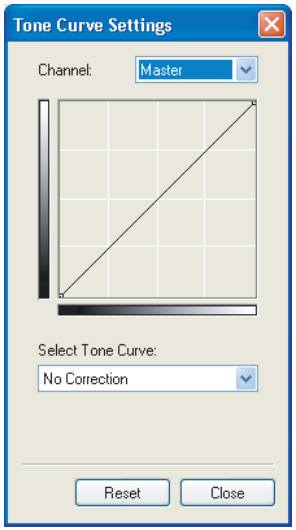
When adjusting a color image, click this button, then click a point in the preview image (or inside the focal crop) to specify the point to execute gray balance adjustment. The gray elements within a scanned image will appear as a neutral gray, and other elements within the image will also have true color reproduction.

[Reset] Resets all the current settings to their default values.

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● Tone Curve Settings

This dialog box enables you to adjust the brightness of a specific area of an image by selecting the type of the tone curve. The tone curve is a graph showing the balance of tone input and output.



[Channel] Select a color to adjust either [Red], [Green], or [Blue], or select [Master] to adjust all three colors together when [Color] or [Color (Documents)] is selected in [Color Mode]. Adjust the elements of grayscale when [Grayscale] is selected in [Color Mode].

[Select Tone Curve]

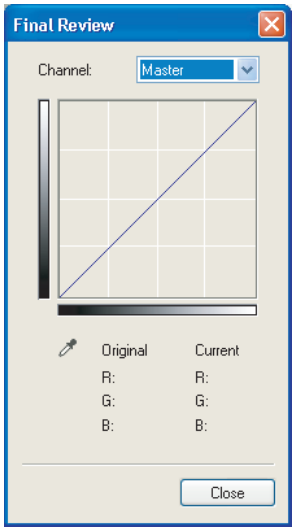
Select the tone curve from [No Correction], [Over Exposure], [Under Exposure], [High Contrast] or [Invert the Negative/Positive Image].

[Reset] Resets all the current settings to their default values.

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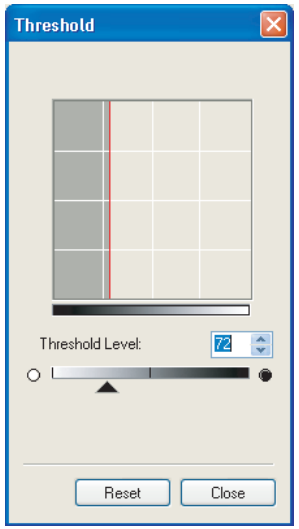
● Final Review

This dialog box enables you to confirm the color settings.



● Threshold

This dialog box enables you to adjust the threshold. By adjusting the threshold, you can sharpen characters in a text document and reduce back-printing such as in newspapers.



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[Threshold Level] Adjust the threshold by moving the slider ▲ or entering a value (0 to 255).

[Reset] Resets the current setting to the default value.

NOTE

The brightness of color and grayscale images are expressed as a value between 0 and 255 but the brightness of black and white images is expressed in terms of either black or white, including the parts of an image which are a color between the two. The boundary at which black and white is divided is called “threshold”.

● Tone Curve/Threshold Drop-Down List

This drop-down list enables you to save a set of color settings made for the focal cropping frame. If there are no cropping frames, settings for the whole preview area are saved.
You can also recall the saved settings and apply them to the selected frames or the whole preview area.

[Custom] When this option is selected, specify a value for each color setting. Even after the registered settings are applied, [Custom] resumes automatically if you change any setting or make adjustments to the selected cropping frame.

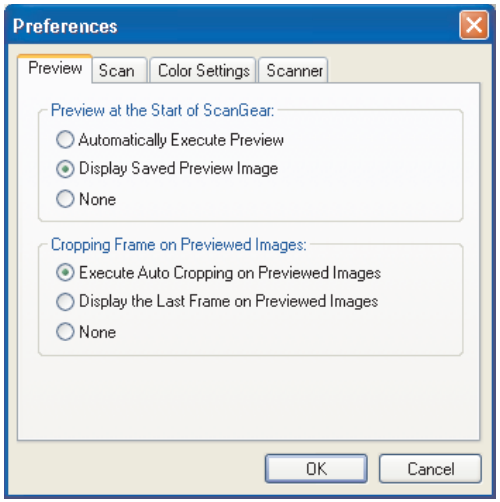
[Add/Delete] Opens the [Add/Delete Tone Curve Settings] dialog box ([Add/Delete Threshold Settings] dialog box, when [Black and White] is selected in [Color Mode]). This dialog box enables you to name and register a set of color settings.

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[Preferences] Dialog Box

Clicking [Preferences] on the [Advanced Mode] tab sheet opens the [Preferences] dialog box. This dialog box enables you to adjust settings for scanning and previewing.

● [Preview] Tab



[Preview at the Start of ScanGear]

Selects the preview operation when you open the ScanGear MF.

[Automatically Execute Preview]:
The preview scan starts automatically when you open the ScanGear MF.

[Display Saved Preview Image]:
Displays the image last previewed.

[None]:
Nothing is displayed.

[Cropping Frame on Previewed Images]

Sets how the cropping frame is displayed when you preview images.

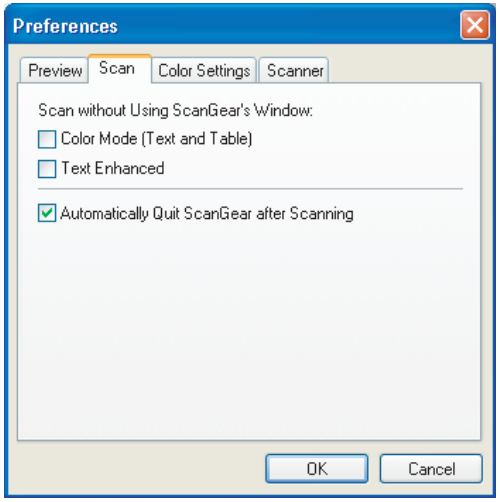
[Execute Auto Cropping on Previewed Images]:
The image will be automatically cropped to match the document size.

[Display the Last Frame on Previewed Images]:
Displays the last frame.

[None]:
No frame will be displayed.

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● **[Scan] Tab**



[Scan without Using ScanGear's Window]

Enables you to scan in a specific color mode when using an application that will not display the [ScanGear MF] dialog box (such as OCR software), overriding the application settings.

[Color Mode (Text and Table)]:
The document is scanned in a mode equivalent to [Color (Documents)] of [Color Mode], regardless of the application settings.

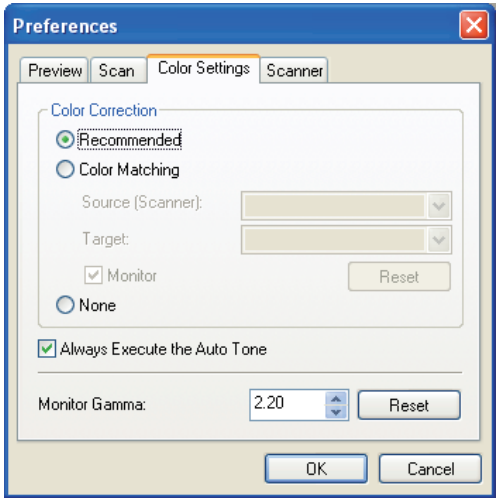
[Text Enhanced]:
The document is scanned in a mode equivalent to [Text Enhanced] of [Color Mode], regardless of the application settings.

[Automatically Quit ScanGear after Scanning]

If selected, the [ScanGear MF] dialog box quits automatically after the image is scanned.
Some applications will automatically quit ScanGear MF after scanning irrespective of this setting.

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● **[Color Settings] Tab**



[Color Correction] Selects the type of color correction.

[Recommended]:
Vividly reproduces the tone of a document on the screen.

[Color Matching]:
Select to automatically match the scanner, monitor and color printer colors. If selected, the Color Settings buttons are invalid in the [Advanced Mode] tab sheet. This setting is available when [Color] or [Color (Documents)] is selected in [Color Mode].

[None]:
No color matching is made. This setting is available when [Color], [Color (Documents)] or [Grayscale] is selected in [Color Mode].

[Always Execute the Auto Tone]

If selected, the image color will always be automatically corrected. This setting is available when [Color], [Color (Documents)] or [Grayscale] is selected in [Color Mode].

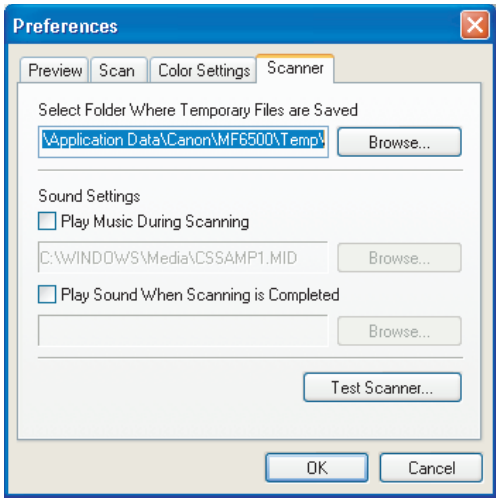
[Monitor Gamma] Enables you to perform gamma correction. Specify the gamma value (0.10 to 10.00) of the monitor for viewing the scanned image. This setting is not reflected in the scanning result when [Black and White] is selected in [Color Mode].

NOTE

[Monitor Gamma] value will be fixed to 2.20 when [Color Matching] is selected in [Color Correction].

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● [Scanner] Tab



[Select Folder Where Temporary Files are Saved]

Click [Browse] and specify the folder in which the files are saved.

[Sound Settings] Sets the scanner to play music during scanning or play a sound when scanning is completed.
You can specify the following files: MIDI files (*.mid, *.rmi, *.midi), Audio files (*.wav, *.aiff, *.aif), MP3 file (*.mp3).

[Play Music During Scanning]:
If selected, the scanner plays music during scanning. Click [Browse], then specify a sound file.

[Play Sound When Scanning is Completed]:
If selected, the scanner plays sound when scanning is completed. Click [Browse], then specify a sound file.

[Test Scanner] Opens the [Scanner Diagnostics] dialog box, which enables you to confirm normal operation of the scanner. Check that the power cord is plugged in, and the USB cable is connected between the machine and your computer, then click [Start].

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Determining Resolution

The data in the image you scan is a collection of dots carrying information about brightness and color. The density of these dots is called “resolution” and “dpi” (dots per inch) refers to the number of dots in one inch.
You can specify a resolution in [Image Quality] in the MF Toolbox settings dialog box, or in [Output Resolution] in the ScanGear MF.

● Images for Display on a Monitor

Images for display on a monitor in general should be scanned at a resolution of 75 dpi.

● Images for Printing

Images to be printed should be scanned at a resolution which corresponds to the resolution of the printer.

NOTE

With a color printer, the colors are expressed as a certain percentage of ink pigment so scanning your document at half the resolution of the printer should be fine.

● Printing Scale

For example, if you want to print a document which is twice the original size both vertically and horizontally, the resolution of your document will be reduced by half. In such a case, scan the original document at double the resolution so that you can print the document with sufficient quality, even if you double the size of the document. Conversely, if you want to print a document at a reduced size, it should be sufficient to scan at half the resolution.

● Resolution and Data Size

If you double the resolution, the image data will be four times greater. If the data is too large, processing speed will slow down significantly, and you may experience malfunctions such as lack of memory. Make sure the resolution corresponds to the planned use of the image and set it at the lowest level possible.

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Scanning with the WIA Driver

NOTE

The WIA driver does not support 2-sided scanning.

Scanning from the [Scanner and Camera Wizard] Dialog Box (Windows XP Only)

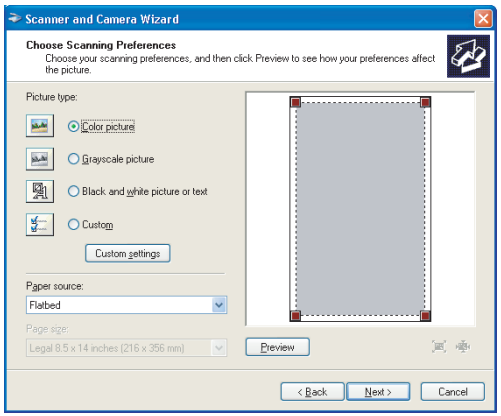
1. Open the [Scanners and Cameras] folder.

Click [start] on the Windows task bar → select [Control Panel] → [Printers and Other Hardware] → [Scanners and Cameras].

2. Double-click the corresponding WIA driver icon.

3. Click [Next >].

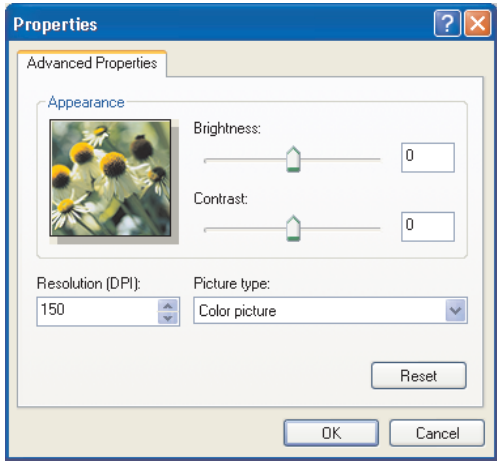
4. Select a picture type.



You can select from [Color picture], [Grayscale picture], [Black and white picture or text], and [Custom].
When selecting [Custom], click [Custom settings] to make detailed settings in the [Properties] dialog box.

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5. Select the paper source.

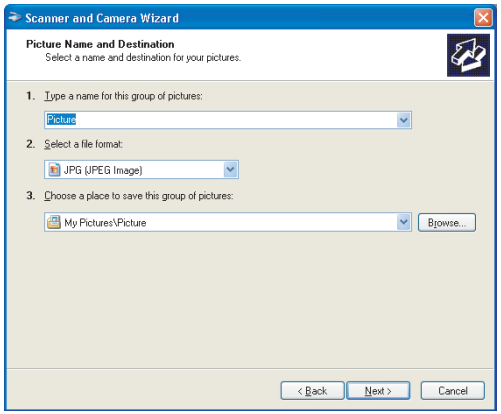
You can select from [Flatbed] or [Document Feeder].

6. Specify the scanned area.

If you have selected [Flatbed] as the paper source, click [Preview] → drag ■ to specify the scanned area.
If you have selected [Document Feeder] as the paper source, select the page size from the drop-down list.

7. Click [Next >].

8. Specify a name, a file format, and the location for saving the group of pictures.

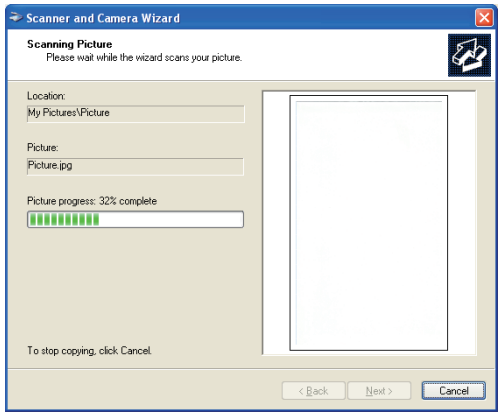


NOTE

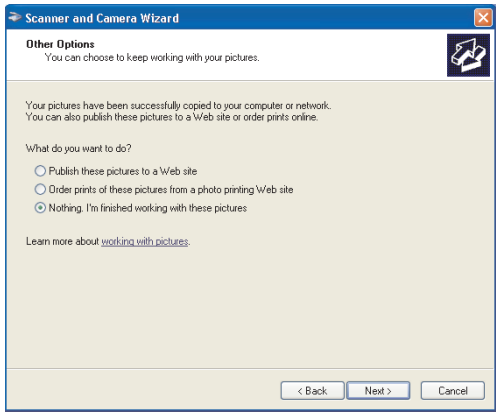
– When you save more than one picture in the same location, sequential numbers are automatically added at the ends of file names.
– You can select a file format from [BMP (Bitmap Image)], [JPG (JPEG Image)], [TIF (TIF Image)], and [PNG (PNG Image)].

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9. **Click [Next >] to start scanning.**



10. **Click [Next >].**



If you want to publish these pictures to a Web site or order printouts online, select the corresponding option.

11. **Click [Finish].**

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Scanning from the [Windows FAX & Scan] Dialog Box (Windows Vista Only)

Depending on the edition of your Windows Vista, this function may not be supported.

1. Open the [Windows FAX & Scan] dialog box.

Click [Start] on the Windows task bar → select [Control Panel] → [Hardware and Sounds] → [Scan a document or picture] in [Scanners and Cameras].

2. Click [New Scan] to open the [New Scan] dialog box.

You can open it also from the [File] menu by selecting [New] → [Scan].

3. Make sure the corresponding scanner driver is displayed on [Scanner].

If you want to use other scanners, click [Change...] and select a desired scanner driver icon.

4. Specify required scan settings.

For details on the settings, see “[New Scan] Dialog Box,” on p. 2-46.

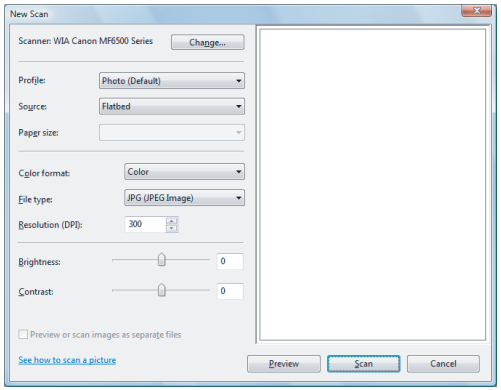
5. Click [Scan].

It starts scanning. Scanned image displays on [Windows Fax & Scan].
When you scan more than one picture, sequential numbers are automatically added to the file names and the image files are saved in the [Scanned Documents] folder in the [Document] folder.
Renaming the image file is available afterward.

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[New Scan] Dialog Box

You can specify detailed settings for each scan.



[Scanner] The corresponding scanner driver is displayed. Click [Change...] to select a desired scanner driver icon.

[Profile] Selects the use for the scanned image from [Add profile…], [Last used settings], [Document], and [Photo (Default)].

NOTE

– If you select [Last used settings], the settings previously used are recalled.
– If you select [Add profile...], you can save new profiles from the [Add New Profile] dialog box.
– To delete or edit added profiles, click [Delete] or [Edit] in the [Scan Profiles] dialog box in the [Scanners and Cameras] folder.

[Source] Selects from [Flatbed] (Platen glass) or [Feeder (Scan one side)].

NOTE

If you have selected [Flatbed] as the paper source, click [Preview] → drag to specify the scanned area. If you have selected [Feeder (Scan one side)] as the paper source, select the page size from the [Paper size].

[Color format] Selects the scanning color type from [Color picture], [Grayscale picture], or [Black and white picture or text].

[File type] Selects a file format from [BMP (Bitmap Image)], [JPG (JPEG Image)], [TIF (TIF Image)], and [PNG (PNG Image)].

[Resolution (DPI)] Selects the scanning resolution in dot per inch (50 to 600).

[Brightness] Specifies the brightness (-100 to 100).

[Contrast] Specifies the contrast (-100 to 100) (only for color or grayscale scanning).

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Scanning from Windows Photo Gallery (Windows Vista Only)

1. Open the [Windows Photo Gallery].

Click [Start] on the Windows task bar → select [All programs] → [Windows Photo Gallery].

2. Open the [Import Pictures and Videos] dialog box.

Select [Import from Camera or Scanner] from the [File] menu.

3. Double-click the corresponding scanner driver icon.

Or select a corresponding scanner driver icon then press [Import].

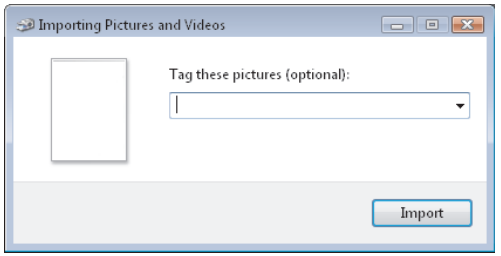
4. Make sure the corresponding scanner driver is displayed on [Scanner].

If you want to use other scanners, click [Change...] and select a desired scanner driver icon.

5. Specify required scan settings.

For details on the settings, see “[New Scan] Dialog Box,” on p. 2-46.

6. Click [Scan].



You can classify the scanned image by typing a tag in [Tag these pictures (optional):].
If you save the scanned image without typing the tag, it will be saved in a new folder created under the [pictures] folder, named by its scan date.

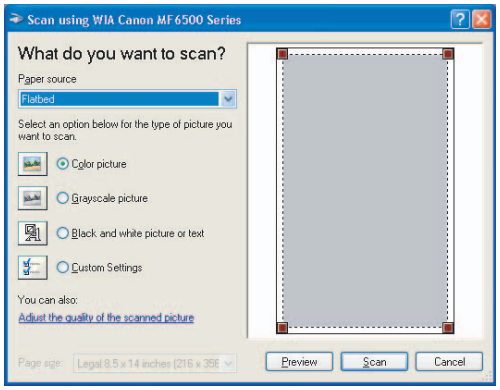
7. Click [import].

When you save more than one picture, sequential numbers are automatically added to the file names.
Renaming the image file is available afterward.

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Scanning from an Application (Windows XP/Vista Only)

With the WIA driver dialog box open, follow the procedure below. On how to display the WIA driver, see “Scanning an Image from an Application,” on p. 2-15.



1. Select the paper source.

You can select from [Flatbed] or [Document Feeder].

2. Select the picture type.

You can select from [Color picture], [Grayscale picture], [Black and white picture or text], and [Custom Settings].

3. If necessary, click [Adjust the quality of the scanned picture].

The [Advanced Properties] dialog box appears.

4. Adjust the quality of the image → click [OK].

For details on the settings, see “Advanced Properties,” on p. 2-49.

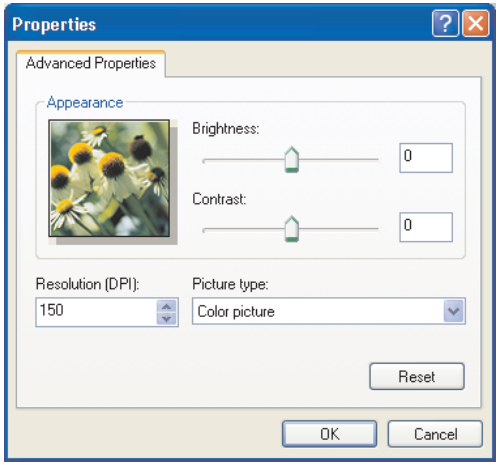
5. Specify the scanned area.

If you have selected [Flatbed] as the paper source, click [Preview] → drag ■ to specify the scanned area.
If you have selected [Document Feeder] as the paper source, select the page size in [Page size].

6. Click [Scan].

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Advanced Properties



[Appearance] Shows the preview of sample image.

[Brightness] Specifies the brightness (–127 to 127).

[Contrast] Specifies the contrast (–127 to 127) (only for color or grayscale scanning).

[Resolution (DPI)] Selects the scanning resolution in dot per inch (50 to 600).

[Picture type] Selects the scanning color type ([Color picture], [Grayscale picture], or [Black and white picture or text]).

[Reset] Resets all the current settings to their default values.

NOTE

The setting items and default values in the [Advanced Properties] tab vary depending on the type of picture you select.

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Scanning Problems

Cannot scan a document.

Q **Is there anything displayed on the LCD?**

A If anything is displayed on the LCD, see Chapter 10, “Troubleshooting,” in the *Reference Guide*.

Q **Is the Error indicator blinking?**

A If the Error indicator is blinking, see Chapter 10, “Troubleshooting,” in the *Reference Guide*.

Q **Is the document placed correctly?**

A Remove the document and place it on the platen glass or in the ADF correctly. (See Chapter 2, “Document and Paper,” in the *Reference Guide*.)

Q **Is your computer working properly?**

A Restart your computer.

Q **Is your USB hub or repeater working properly?**

A When using a USB hub or repeater, try connecting a USB cable directly to the computer to check if it works properly. If you can scan the document successfully after connecting a USB cable directly to the computer, check your USB hub or repeater if it is working properly.

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Q **Are you using a USB 2.0-compatible USB hub?**

A If you connect the machine to a USB 2.0-equipped computer using a USB 2.0-compatible USB hub, you may not be able to scan. In this case, connect a USB cable directly to the computer.

A If you connect the machine to a USB 2.0-equipped computer, you may not be able to scan. If your PC is equipped with two or more USB ports, try connecting the machine to another USB port. If the problem persists, follow the procedure below to modify the INI file. It is recommended to make a backup copy of the file before making any changes to it.

1. Open the following file in Notepad or another text editor application.
   Windows 2000:
   winnt\system32\CNCMFP20.INI
   Windows XP/Vista:
   windows\system32\CNCMFP20.INI
2. In the [ScanSize] section, change "Read512Bytes=0" to "Read512Bytes=1," then save the file. Take care not to modify any other parts.

Q **Have you specified the document source correctly with the MF Toolbox, ScanGear MF, or WIA driver?**

A Choose between placing the document on the platen glass or in the ADF.

Q **After installing the software for this machine, did you install a TWAIN-compatible application?**

A The TWAIN system file is replaced with something inappropriate and you will be unable to scan images. If this happens, remove the software, then reinstall it. (See "Software Settings with Computer," in the *Starter Guide*.)

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Q **Is the machine recognized in [Scanners and Cameras]?**

A Make sure the corresponding scanner driver icon is displayed in [Scanners and Cameras].

1. Click [start] on the Windows task bar → select [Control Panel] → [Printers and other Hardware] → [Scanners and Cameras]. (Windows Vista: [start] → [Control Panel] → [Hardware and Sound] → [Scanners and Cameras]. Windows 2000: [Start] → [Settings] → [Control Panel] → double-click [Scanners and Cameras].)
2. If the corresponding scanner driver icon is displayed in the [Scanners and Cameras], the machine is recognized. If not, remove the software, then reinstall it. (See "Software Settings with Computer," in the *Starter Guide*.)

You tried to create a multi-page PDF, but were not able to scan several documents.

Q **Is the [Automatically Quit ScanGear after Scanning] check box in [Preferences] selected?**

A If you scan with the [Automatically Quit ScanGear after Scanning] setting selected, only the documents placed at one time on the platen glass will be scanned.
Click a button on the MF Toolbox and, in the settings dialog box, select [Display the Scanner Driver] to open the ScanGear MF. In the [Preferences] dialog box of Advanced Mode, clear the [Automatically Quit ScanGear after Scanning] check box before scanning.

Computer has hung up or frozen.

Q **Is enough memory loaded in your computer?**

A Quit other opened applications and try again.

Q **Is enough space available in the hard disk?**

A Check that the hard disk has enough available space, in particular when scanning large documents at a high resolution. For example, a LTR-size document scanned at 600 dpi, full color requires a minimum of 300 MB of disk space.

Q **When an error occurred during scanning an image in Photoshop.**

A Change the allocated memory in Photoshop. From the [Edit] menu, select [Preferences] → click [Memory & Image Cache]. Change the [Memory Usage] in a range of approximately 50% to 60%.

Q **Is the driver installed properly?**

A Remove the software, then reinstall it. (See "Software Settings with Computer," in the *Starter Guide*.)

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You installed the applications in the CD-ROM supplied with the machine but they are not registered in the MF Toolbox.

Q **Have you installed the applications with the MF Toolbox open?**

A If you install the applications with the MF Toolbox open, the applications will not be registered in the MF Toolbox. On the MF Toolbox dialog box, click [Set] to register the application manually. (See “External Program (Mail Program),” on p. 2-13.)

When you click a button on the MF Toolbox, another application opens.

Q **Is the application selected correctly for that button?**

A Click a button on the MF Toolbox and select the application you want to open for that button. (See “External Program (Mail Program),” on p. 2-13.)

Changed settings in a dialog box are not activated.

Q **Did you restart your computer after changing the settings?**

A If you open [Scanners and Cameras] and change the settings in the [Events] tab, the changes may not be reflected. In this case, restart your computer.

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Scanned images look dirty.

Q **Are the scanning components of the machine clean?**

A Clean the platen glass, the platen glass cover and the ADF scanning area.

Q **Is the image size too small?**

A Some applications do not display an image properly at small sizes. Try displaying the image at 100% magnification.

Q **Is the monitor's display color set below 16 bits?**

A In [Display Properties], set the display colors to 16-bit color, 24-bit color or higher.

Scanned image is displayed at a larger (smaller) size on the computer screen.

Q **Is the resolution setting correct?**

A Do one of the following:

– Enlarge or reduce the image display in the application. If you open the image in Paint or Imaging, it may display at a large size and you will not be able to reduce it.

– Change the resolution and scan again. The image will be large if the resolution is high. It will be small if the resolution is low. (See "Determining Resolution," on p. 2-41.)

Cannot scan highlighted marks.

Q **Is [Color Correction] set to [Color Matching] ?**

A In [Advanced Mode] in ScanGear MF, set [Color Correction] to [Color Matching]. (See "[Color Settings] Tab," on p. 2-39.)

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Installing and Uninstalling Problems

Cannot install the software.

Q **Have you followed the instructions to install the software?**

A Try reinstalling the software. If an error occurred and installation was not complete, restart your computer and try reinstalling the software.

Q **Are any other applications open?**

A Quit all of these and try reinstalling the software.

Removal of the drivers takes too long (Windows XP).

Q **Is any application such as an anti-virus open when removing the software?**

A Quit any applications (including anti-virus) before removing the software.

Removal of the software was completed, but the [Canon] folder remains in the [Start Menu].

Q **Did you remove the MF drivers before removing the MF Toolbox?**

A If you remove the MF drivers first, the [Canon] folder may remain even after the MF Toolbox is uninstalled. In this case, perform the following steps to remove the folder.
In Windows XP, right-click the [start] menu to open the Windows Explorer → select [Start Menu] in [All Users] → [Programs] → delete the [Canon] folder.
In Windows Vista, right-click the [start] menu and select [Explore - All Users] → select [Start Menu] in [All Users] → [Programs] → delete the [Canon] folder.
In Windows 2000, open [Settings] from the [Start] menu → click [Taskbar & Start Menu] → [Advanced] → [Advanced] → select [Start Menu] in [All Users] → [Programs] → delete the [Canon] folder.

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Cannot use the software after upgrading to Windows XP/Vista.

Q **Have you upgraded Windows 2000 to Windows XP/Vista without removing the software?**

A Remove the software, then reinstall it. (See “Software Settings with Computer,” in the *Starter Guide*.)

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Scanner Specifications

Type	Color scanner
Max Scanning Size	8 ½" x 14" (216 mm x 356 mm)
Scanning Resolution	25-9600 dpi (ScanGear MF)
Scanning Speed	Color: 2.56 msec/line (600 dpi) Grayscale: 2.56 msec/line (600 dpi)
Host Interface	USB 1.1, USB 2.0
System Requirements	Windows 2000 Professional/XP Windows Vista
Device Driver	TWAIN and WIA (Windows XP/ Windows Vista only) compliant

NOTE

Specifications are subject to change without notice.

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Glossary

A

Application

Abbreviation of the phrase “application software.” Software designed for a specific purpose such as word processing software, spreadsheet software, database software, or a combination of these.

B

Bit

An indication of the volume of data used to describe points in an image. A 1-bit image assigns image data black or white color values depending on whether the brightness value is above or below a particular threshold value. The result is a two-color image. An 8-bit grayscale image expresses an image in 256 shades of gray ranging from white to black. A 24-bit color image assigns 8 bits to each RGB color channel, expressing each pixel in approximately 16.8 million colors.

Brightness

The relative proportion of light and dark areas. Decreasing brightness darkens the overall image; increasing brightness lightens it.

C

Color Matching

In some cases, the range of colors captured by a scanner exceeds the range that can be displayed by a particular monitor. In addition, the colors displayed for an image on the monitor may be slightly different than those output by a printer. Color Matching is the process used to make the colors captured by a scanner consistent with those shown on a display or printed on a printer.

Contrast

The degree of difference between the lightest and darkest areas of an image. Decreasing contrast lightens the dark areas and darkens the light areas; increasing it darkens the dark areas and lightens the light areas.

Control Panel

The set of Windows programs you can use to change system, hardware, software, and Windows settings.

Crop

The action of selecting only part of an image for use. Using the Crop button on the ScanGear MF toolbar, a portion of the preview image can be selected and only that portion is then re-previewed or included in the final scan.

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D

Default setting

A setting that is automatically used if no other setting is specified.

Descreen

A function that reduces the occurrence of moire in the scan of a printed item. Moire is the patterns or stripes that are visible in a low-resolution scan of a picture or photo in a book or magazine due to the interference patterns between the dots that comprise the image.

Desktop

The entire Windows screen that represents your work area in Windows. Icons, windows, and the taskbar are displayed on the Windows desktop.

Dot

Images are reproduced as rows and columns of dots. When an item is scanned with a scanner, the resolution, or dot density, of the scanned image is measured as the number of dots per inch (dpi).

dpi

Dots per inch. A unit of measurement for indicating a machine's resolution.

Driver

A program that controls how the computer and an external device interact. For example, the scanner driver supplies OS with information and features of the installed scanner. See also Scanner driver.

E

Exif

The Exchangeable Image File (Exif) format is a Japan Electronic Industry Development Association (JEIDA) standard used by most digital cameras to store images. The Exif compressed files use the baseline JPEG format, so they can be read by any application supporting "JPEG." EXIF supports the storage of extra information, such as the date & time the image was taken, exposure information, etc., within the header of each JPEG file.

F

Folder

A container in which documents, program files, and other folders are stored on your disks. Formerly referred to as a directory.

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G

Gamma Correction

Method for changing the brightness of an image. With gamma correction, the brightness of parts of an image in the middle of the tonal range is changed without changing the lightest or darkest areas of the image, which means you can change the brightness of an image while maintaining contrast.

Grayscale image

A bitmap image that stores data for each dot as a shade of gray, rather than as black or white.

I

Install

To copy software to a designated location on a computer's hard disk so that it can be used at any time.

Interface

The connection between two devices through which they communicate with each other. The machine features a USB interface, which makes it compatible with IBM and similar personal computers.

K

Kilobyte (KB)

A unit of measurement, representing the binary number 1024, used to describe machine or computer memory size in thousand-byte units.

L

Landscape

A horizontal scanning orientation. Documents are scanned across the longer axis of the page.

M

Megabyte (MB)

A unit of measurement, representing one million bytes, used to describe machine or computer memory size.

Multi-page PDF

Several scanned documents saved as one PDF. Each document will become one page of the PDF.

My Computer

The Windows program that you can use to browse through your computer's filing system, and to open drives, folders, and files. You can also use [My Computer] to manage your files and your filing system, by moving, copying, renaming, and deleting items.

N

Network

A group of computers connected by cables or other means and using software that enables them to share equipment (such as printers) and exchange information.

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O

OCR (Optical Character Reader)

Device for reading characters optically. System for extracting information in a text format from information in the form of a graphic such as hand-written or printed characters which have been scanned with a scanner. You cannot edit text scanned with a scanner because it is in a graphic format, but with OCR software you can convert to a text file and then edit the text with word-processing software.

Orientation

The direction in which a document is fed, either along the width (portrait) or length (landscape) of the page.

P

PDF

Stands for Portable Document Format. A widely used format for transmitting and viewing documents on computers. PDF documents can be read or printed out with Adobe's Acrobat Reader program.

Pixel

Short for picture element, a pixel is the smallest unit used to measure a display image.

Platen

The document scanning unit.

Portrait

A vertical scanning orientation. Documents are scanned across the shorter axis of the page.

Preview

Provisional scanning and display of the document you are about to scan before you actually scan it. If the preview scan looks different from what you want, you can change the settings, display the preview again and confirm before scanning.

Preview area

The area at the left of the ScanGear MF main window. When the Preview button is clicked, the item(s) on the platen glass of the scanner are scanned, and the results are displayed as the preview image in this area. At this stage, the scanned image is not passed on to the host application program.

Properties dialog box

The dialog box that contains information about a particular device, such as a scanner.

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R

Random Access Memory (RAM)

The working memory of the computer in which programs and data are temporarily stored while you use them. Resetting or shutting off the computer clears all information from RAM. Printing very complicated documents might require closing other running programs or adding more RAM to the computer.

Reinstall

To remove installed software and install again.

Resolution

The density of dots for any given output device, expressed in terms of dots per inch (dpi). Low resolution causes font characters and graphics to have a jagged appearance, but prints faster than higher resolutions. Higher resolution provides smoother curves and angles as well as a better match to traditional typeface designs, but prints more slowly. Resolution values are represented by horizontal data and vertical data, for example, 600 x 600 dpi.

S

Scanner driver

A program that controls how the computer and scanner interact. The scanner driver is provided with two drivers: The TWAIN and the WIA driver (for use with Windows XP/Vista).

Scanners and Cameras folder (Scanners and Cameras Properties dialog box)

The folder or dialog box that contains information about your imaging devices, such as scanners or cameras.

T

TWAIN

Industry-standard protocol for transferring information from devices such as scanners and digital cameras to a computer.

Industry-standard protocol for an application programming interface (API) for input devices such as scanners. If both the device and the application comply with the standard, they will be compatible regardless of differences in manufacturer or model.

For example, with TWAIN-compatible image-processing software, you can start the scanner's TWAIN driver from the software's menu, scan the document and return the scanned image to its original image-processing software.

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U

Uninstall

To remove software installed on a computer and return the computer to its condition before the software was installed.

Universal Serial Bus (USB) interface

These are new serial interface standards. This bus automatically recognizes connections (Plug and Play) to allow plugging and unplugging connectors with the power still turned on to the PC or peripheral equipment.

W

WIA (Windows Image Acquisition)

Standard for downloading images from scanners or digital cameras. The machine includes a TWAIN-compliant driver and a WIA-compliant driver. The WIA driver can only be used with Windows XP/Vista. With either driver, you can scan documents with the machine in applications which support the TWAIN interface (Photoshop etc.).

Windows Explorer

The Windows program you can use to browse through, open, and manage the disk drives, folders, and files on your computer in a network system. You can also use Windows Explorer to view and open shared folders on other computers on the network. You can use Windows Explorer to manage your files by moving, copying, renaming, and deleting files.

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